

REMARKS

Claims 1, 3-18, 20-21 and 23-26 are pending in this application, with claims 13-14, 21 and 24-26 being withdrawn from consideration.

I. Formal Matters

The Office Action withdraws claims 24-26 from consideration as being directed to non-elected species. Although the alleged grounds are erroneous, Applicant acknowledges the withdrawal of these claims and requests rejoinder upon allowance of the generic elected claims.

II. Pending Claims Define Patentable Subject Matter

Applicants acknowledge the withdrawal of all prior grounds of rejection in favor of new grounds. However, because the new grounds of rejection also fail to make a *prima facie* case of obviousness, for the reasons discussed below, the pending claims are patentable.

The Office Action rejects claims 1, 5-7 and 15-16 under 35 U.S.C. §103(a) over a Miner Enterprises Catalog (Miner) in view of U.S. Patent No. 6,644,214 to Schorr. This rejection is respectfully traversed.

Applicants are entitled to the March 26, 2003 U.S. filing date of their earlier filed provisional Appl. No. 60/457,311. Because U.S. Patent No. 6,644,214 to Schorr issued after this date and did not have an earlier publication, it only constitutes prior art under 35 U.S.C. §102(e). Moreover, because Schorr is commonly assigned to ASF-Keystone, the reference falls under the 35 U.S.C. §103(c) exception and is not available as prior art under 35 U.S.C. §103(a). Accordingly, this rejection is moot.¹

In addition, independent claim 1 recites, *inter alia*, a long travel constant contact side bearing having a spring travel length of at least 5/8", at least two coil springs with a combined

¹ Applicants further reserve the right to antedate Schorr 214.

load rating of between about 4,000 to 6,000 lb/in., a generally rectangular base and cap, the cap surrounds the base with a precisely controlled spatial gap of between 0.006" - 0.046", and the cap and base are configured to retain an overlap that allows at least 5/8" travel before abutting.

This combination of specific features has been tested and found to result in improved tracking curving, and load leveling characteristics of the truck without adversely affecting hunting, and while reducing impact forces, stresses and wear of the base and cap (Applicants' paragraphs [0019], [0021], [0052], and [0054]). For example, Applicants found that "substantially improved ride and load balancing characteristics were achieved by dramatically reducing the load rate of the springs" (paragraphs [0064]) in this long travel configuration. Applicants also found that this use of substantially softer spring constants provides a suspension system "with a slower reaction time." In particular, it was found that if below about 4,000 lb/in, the side bearing may disengage from contact with the car body, which is undesirable. Moreover, if above about 6,000 lb/in., there were found to be sensitivities of set-up deviations and a lessening of ride quality. However, in between this range, improved ride and load balancing was achieved. Moreover, precise control of the spatial gap to be between about 0.006" to 0.046" has been found to reduce associated impact forces, stresses and wear (Applicants' paragraph [0019]).

The Office Action admits that Miner fails to teach: (1) a generally rectangular shaped base and cup; (2) at least two coil springs; and (3) the recited spatial gap. Miner also fails to recite a coil spring at all and fails to teach a combined load rating of between about 4,000 and 6,000 lb/in.

Miner relies on a single elastomer pad and a circular base and cap in Figs. 5-20, with Figs. 9-20 having a circular cap that fits within the base and Figs. 5-8 having a circular cap that covers the base. The rectangular base and cap in Figs. 1-4 are not for a long travel side

bearing, and also show a cap that fits within the base. Thus, the Figs. 1-4 embodiments are not applicable. However, when read as a whole, this teaches away from use of a rectangular housing for long travel side bearings because rectangular caps are only used for short travel applications and all long travel applications use a substantially circular base and cap.

Schorr does not constitute prior art under 35 U.S.C. §103(a) as discussed above. Because Miner alone fails to teach each and every feature of the pending claims, the claims are patentably distinct.

However, even if properly cited, while Schorr is relied upon for use of two coil springs and a generally rectangular base and cap, Schorr is silent as to any spacing or spring values.

In making the combination, the Office Action alleges that the motivation to use a rectangular cap and at least two coil springs from Schorr would be "to increase the damped vibration characteristics of the bearing while increasing load capacity." However, neither reference teaches or suggests a "combined load rating" of between 4,000 - 6,000 lb/in. as claimed. In fact, the Patent Office's own reasoning and purpose would suggest that use of two or more springs would result in a higher load capacity, which when Miner already has a single elastomer with a load rating of 4,500 lbs would be in excess of the recited range.

In further support of this, Applicants direct the Examiner to Applicants' paragraph [0064], where it is stated that "prior three-spring designs had dramatically higher spring constants, which were believed to be necessary to achieve proper load support and cushion to the railcar." Thus, one of ordinary skill in the art may have used individual springs or pads that fall within the range claimed, but would have been led, based on standard industry practices, to combine them to provide a sufficiently high "combined load rating" to achieve what was perceived to be proper load support and cushion. Thus, because there is no motivation to combine the references as alleged, the combination must fail.

The mere fact that references can be combined or modified does not render the combination obvious unless the prior art suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990).

Thus, there is no express teaching of the use of a combined load rating within the recited range or a teaching of the criticality to such a range. Accordingly, absent impermissible hindsight, one of ordinary skill in the art would not have been led to the use of a "combined" spring loading of between about 4,000 to 6,000 lb/in., as recited in independent claim 1. Thus, even if combined, the combination does not teach or suggest this feature.

Moreover, the Patent Office fails to provide motivation for the use of a rectangular base and cap in the Miner side bearings, which each rely on a circular base and cap. Because there is no motivation for the combination, a *prima facie* case of obviousness has not been made.

With respect to the spatial gap range, this range has been found critical to achieve desired control, hunting, wear and impact force criteria. However, Miner has no details as to the tolerances or clearances between the base and cap even for its circular caps and clearly has no appreciation or teaching of a specific spatial gap for use with a rectangular cap and base.

The Office Action relies on Miner (page 20) for a 1/32" clearance. However, this "clearance" refers to the TCC-III models (Figs. 9-20) and relates to a clearance between a central post at the bottom of the base and an interior of the elastomer pad. This is not a clearance between a base and a cap as claimed, and clearly is not a spatial gap between a surrounding rectangular cap and its base as claimed. Moreover, this "clearance" does not control sliding of the cap with respect to the base as alleged. Accordingly, because neither reference appreciates or teaches a criticality to the gap, there is no motivation for the combination, and even if combined the claimed features are not met.

Furthermore, this spatial gap is not just mere design choice. Constant contact side bearings are provided primarily to control hunting of the truck. However, their design impacts several other truck characteristics, such as tracking, curving, load leveling, sway, load capacity, weight transfer reaction time, etc. Thus, a change to any one parameter may have an adverse impact on several other considerations. Because of this strong interaction, changes are not fully predictable and cannot be merely changed or evaluated through routine experimentation. Rather, to obtain a viable design would require extensive experimentation or testing to verify whether changes to one variable have a neutral, positive, or negative effect on other characteristics, and would also likely require compensating changes to other variables. Thus, there are multiple variables and numerous interactions that make a change more than routine. Moreover, optimization is not readily possible since there are no identified result-effective variables, particularly when adjustment has an effect on other parameters. Only when a result-effective variable is found can optimization be considered routine. Accordingly, it would not have been obvious to have the recited spatial gap.

Because the Patent Office has not made a *prima facie* case of obviousness with respect to independent claim 1, claim 1 and claims dependent therefrom are patentably distinct from the applied art.

Additionally, with respect to dependent claims 5-7, the Patent Office has not met its burden of providing a *prima facie* case of obviousness.

In particular, regarding claim 5, the Patent Office has failed to establish that the applied art teaches or suggests that the "cap and base are formed from Grade E steel."

Regarding claim 6, the Patent Office has failed to establish that the applied art teaches or suggests that the "outside surfaces of the base side walls, front wall and/or rear wall have hardened wear surfaces."

Regarding claim 7, the Patent Office has failed to establish that the applied art teaches or suggests that the "corresponding side walls of the base and cap include respective vertically-oriented openings and notches to form a side viewing window that allows visual inspection of the at least one spring."

The Figs. 9-20 embodiments of Miner have no window. Although the Figs. 5-8 embodiments show a window, this window is provided in only the cap wall. It is not shown that a window is formed by side walls of the base and cap including "respective vertically-oriented openings and notches to form a side viewing window that allows visual inspection of the at least one spring."

Accordingly, a *prima facie* case of obviousness has not been set forth with respect to dependent claims 5-7. Withdrawal of the rejection is respectfully requested.

The Office Action rejects claims 3-4, 8, 17-18 and 23 under 35 U.S.C. §103(a) over Miner in view of Schorr, further in view of U.S. Patent No. 3,748,001 to Neumann et al. This rejection is respectfully traversed.

As discussed above, Schorr is unavailable under 35 U.S.C. §103(a).

Independent claims 17 and 23 include the spatial gap and combined load rating features of independent claim 1 and further recite that the top surface of the cap mates with "each of the front, rear and side walls of the cap through flat, non-zero acute intersecting surfaces that reduce gouging on railway car body contact surfaces during use." Dependent claim 3 also includes this latter feature. This feature is shown, for example, in surfaces 129 in Applicants' Figs. 3, 7 and 8.

Besides the circular cap of Miner not having front, rear and side walls, each embodiment of Miner clearly shows a cap having squared edges. Thus, Miner fails to teach each and every feature of independent claims 17 and 23.

Schorr (not citable under 35 U.S.C. §103(a)) similarly describes a cap with squared edges. Neumann fails to overcome the deficiencies of Miner (or Schorr if properly cited).

The Office Action alleges that Neumann teaches coped surfaces. However, as clearly evidenced by Figs. 1-3, although side walls may be coped, front and rear walls 40 are taught to have squared edges with the top surface 36 (see in particular the cross-sectional view of Fig. 3). Accordingly, even if combined, the combination does not teach or suggest providing coped or flat, non-zero acute intersecting surfaces on each wall, including front and rear walls as recited in claims 17, 23 and 3.

The two angled sidewalls in Neumann are not in contact during use. Thus, these walls would not experience gouging and would not achieve the benefit alleged in the Office Action. However, the squared edge walls in Neumann may contact during fore/aft movement of the side bearing during use. Neumann does not appreciate that these walls may gouge the surface and clearly does not teach or suggest coping of all side walls to have "flat, non-zero acute intersecting surfaces that reduce gouging on railway car body contact surfaces during use" as claimed. Claims 17, 23 and 3 are thus patentably distinct.

Regarding claim 8, claim 8 recites that front and rear walls are substantially flat. Miner teaches use of circular walls. Schorr clearly teaches in Fig. 2 that its front and rear walls are also circular or arcuate and not substantially flat. Accordingly, even if combined, the combination does not teach or suggest the feature of dependent claim 8.

Accordingly, independent claims 17 and 23 are patentably distinct and allowable and dependent claims 3-4, 8 and 18 are allowable for their dependence on allowable base claims and for the additional features recited therein. Withdrawal of the rejection is respectfully requested.

The Office Action rejects claims 9-12 and 20 under 35 U.S.C. §103(a) over Miner in view of Schorr, further in view of U.S. Patent No. 3,735,711 to Hassenauer. This rejection is respectfully traversed.

As discussed above, Schorr is not citable under 35 U.S.C. §103(a). Moreover, as admitted, neither Miner nor Schorr teaches a base and cap with complementary keying features in a diagonal relationship as claimed. For this, the Patent Office relies upon Hassenauer, alleging that features 23 and 28 are keying features. Applicants disagree.

The Patent Office has failed to give patentable weight to the clarified language that the complementary keying features are "located substantially on a diagonal to the fore/aft direction of the side bearing when mounted in a railway car truck." See, for example, Applicants' Figs. 9-10 showing elements 150, 160 located on the diagonal.

The alleged structure in Hassenauer is provided perpendicular to the fore/aft direction of the railway car truck, and thus not on the diagonal as claimed. Moreover, on a circular cap as in Hassenauer, there is no diagonal. Thus, the Hassenauer structure cannot prevent improper orientation because the cap can be installed 180° relative to the base and still attach.

The claimed complementary keying features "prevent mismatch or improper orientation of components." Hassenauer's cap 10 and finger structure are provided to prevent relative relation of the base and cap once properly mounted and thus is not a keying structure to prevent mismatch. Moreover, cap 10 can be installed with fingers 28 aligned within slot portion 23 without full relative rotation by a user to position 25. That is, cap 10 must be properly pressed down, slid laterally across opening 24 and released to be locked in opening

25. Thus, this side bearing is capable of being mispositioned. Also, as discussed above, cap 10 is capable of being mounted in two opposite positions (180° opposed) so orientation cannot be ensured. On the other hand, with the claimed diagonal keying feature, the base and cap can mate with only one relative orientation.

Thus Hassenauer fails to overcome the deficiencies of Miner (and Schorr if properly cited). Accordingly, dependent claims 9-12 and 20 define over the applied art and are allowable for their dependence on allowable base claims and for the additional features recited therein. Withdrawal of the rejection is respectfully requested.²

III. Rejoinder of Withdrawn Claims

Because withdrawn claims 13, 14, 21 and 24-26 depend from or contain all of the features of allowable generic independent claims 1 or 17, these claims must be rejoined and allowed.

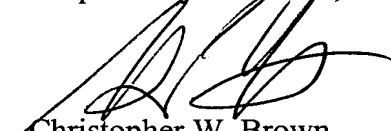
² The reliance in the Office Action on Curtis to "attenuate or lessen rocking" is not understood because Curtis is not applied and the alleged advantage does not flow from provision of the claimed diagonal keying feature.

IV. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of the pending claims are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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